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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HERMAN OSKAM, NICOLAAS DEKKER and
JAN PIETER WETSEMA

Appeal 2008-0810
Application 10/737,061
Technology Center 3600

Decided: June 11, 2008

Before TERRY J. OWENS, MURRIEL E. CRAWFORD, and
STEVEN D.A. MCCARTHY, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants appeal from a rejection of claims 2, 3, 9-12, 17-28, 33-36 and 38-40. Claims 1, 8 and 13-15 have been withdrawn from consideration by the Examiner, claims 4, 6, 16, 29, 31 and 37 have been canceled, and claims 5, 7, 30, 32 and 41-44 stand allowable.

THE INVENTION

The Appellants claim a lifting and lowering mechanism for a blind.
Claim 26 is illustrative:

26. A lifting and lowering mechanism for a blind, including:

a rotatable drive shaft;

at least one lift cord; and

a cord spool including an elongated generally cylindrical body with a first end and a second end and a circumferential outer surface of a given length extending therebetween, said lift cord being windable onto said first end and unwindable from said first end, wherein the circumferential outer surface has a plurality of generally parallel extending longitudinal ribs.

THE REFERENCES

Buck	US 4,574,597	Mar. 11, 1986
Fun	US 5,908,062	Jun. 1, 1999
Judkins	US 2001/0035269 A1	Nov. 1, 2001
Fraczek	US 2003/0178155 A1	Sep. 25, 2003

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 2, 3, 11, 12, 17-23, 26-28, 33-36 and 38-40 over Fraczek in view of Buck; claims 2, 3, 9, 10, 17-19, 21 and 26-28 over Fun in view of Buck; and claims 24 and 25 over Fraczek in view of Buck and Judkins.

OPINION

We reverse the Examiner's rejections. We need to address only the independent claims, i.e., claims 17 and 26.¹ Each of those claims requires a cord spool having a plurality of longitudinally extending ribs on its outer or winding surface.

It is undisputed that Fraczek and Fun disclose a lifting and lowering mechanism for a blind, comprising each element of the Appellants' independent claims except the ribs (Br. 3, 6-7; Reply Br. 1-3).

Buck discloses "a yarn feeding apparatus for used [sic] with textile machinery, especially knitting machines and particularly circular knitting machines, in which yarn is positively supplied to a rotatably driven drum on which a plurality of winding loops can be stored to form storage windings thereon" (col. 1, ll. 14-19). The drum (5) "may be embodied with axially extending grooves or slots, as is suggested by the dashed lines at 15a and 27a, 25a and 23a in FIGS. 2, 3" (col. 7, ll. 5-7), such that "the yarn rests only on rib-like areas of the surface, which may be suitable under some circumstances for the purpose of yarn feeding" (col. 7, ll. 8-10).

The Examiner argues (Ans. 3):

Buck et al discloses the use of ribs so as to grip the cord as well as to reduce friction for the sliding movement of the cord on the spool and it would have been obvious to provide Fraczek with such ribs for these purposes.

* * *

¹ The Examiner does not rely upon Judkins for any disclosure that remedies the deficiency in Fraczek or Fun, in combination with Buck, as to the independent claims (Ans. 4).

Buck et al discloses such [ribs] so as to grip the cord as well as to reduce friction for the sliding movement of the cord on the spool and it would have been obvious to provide Fun with such ribs for these purposes.

The Examiner does not point out, and it is not apparent, where the relied-upon disclosures appear in Buck.

The Examiner argues (Ans. 5):

Buck et al states that the cord rests only on these ribs. Clearly, these ribs provide advantages, most notably less friction for the sliding of the cords along the axial length of the spool due to reduced surface contact versus a solid surface spool. This is the same motivating factor that drove Appellant's incorporation of ribs in the present invention.

That is one of the Appellants' motivating factors (Spec. 7:30-33), but the Examiner has not pointed out where that motivating factor is disclosed by Buck. Thus, the record indicates that the Examiner used impermissible hindsight in view of the Appellants' disclosure in rejecting the Appellants' claims. See *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); *In re Rothermel*, 276 F.2d 393, 396 (CCPA 1960). Accordingly, we reverse the Examiner's rejections.

The dissent argues:

In light of the similar solutions taught by the references to the problem of winding a cord like-material without tangling, Buck's teachings that the cylindrical surface "may be embodied with grooves or slots extending in the axial direction, so that the yarn rests only on the rib-like portions of the surface located between the grooves or slots" (Buck, col. 3, ll. 63-66) and that resting the yarn only on the rib-like areas of the surface "may be suitable under some circumstances

for the purpose of yarn feeding” (Buck, col. 7, ll. 1-10) would have provided one of ordinary skill in the art reason to similarly improve Fraczek’s or Fun’s apparatuses by providing rib-like portions on the surfaces of Fraczek’s cord gathering shaft and Fun’s cylindrical body.

Buck’s disclosure that the rib-like areas “may be suitable under some circumstances for the purpose of yarn feeding” (col. 7, ll. 9-10) indicates that the rib-like areas are not suitable for all yarn feeders. Buck does not disclose the purpose of the rib-like areas or provide information that permits determination as to which yarn feeders the rib-like areas are suitable. Moreover, contrary to the dissent’s argument, Buck does not indicate that the rib-like areas are an improvement. Thus, it is not apparent why, in view of Buck, one of ordinary skill in the art would have been led to include Buck’s rib-like areas in a device which is not even a yarn feeder, such as Fraczek’s or Fun’s cord winding shaft for raising and lowering curtains or blinds. The only reason indicated by the record for doing so is impermissible hindsight in view of the Appellants’ disclosure. *See W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d at 1553; *In re Rothermel*, 276 F.2d at 396.

Accordingly, we are not persuaded by the dissent of error in our decision.

DECISION

The rejections under 35 U.S.C. § 103 of claims 2, 3, 11, 12, 17-23, 26-28, 33-36 and 38-40 over Fraczek in view of Buck, claims 2, 3, 9, 10, 17-19, 21 and 26-28 over Fun in view of Buck, and claims 24 and 25 over Fraczek in view of Buck and Judkins are reversed.

REVERSED

McCARTHY, *Administrative Patent Judge, dissenting.*

I would sustain the rejections of claims 2, 3, 9-12, 17-28, 33-36 and 38-40 under section 103(a). In *KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 1741 (2007), the Supreme Court held that “[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation . . .” Elaborating on its holding, the Court explained that “[i]n determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103.” *Id.*, 127 S.Ct. at 1741-42.

The Court recognized the impropriety of relying on hindsight to argue that separate elements could be combined as claimed by an applicant. *Id.*, 127 S.Ct. at 1741. Nevertheless, the Court held that “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the

technique is obvious unless its actual application is beyond his or her skill.”
Id., 127 S.Ct. at 1740.

I agree with the majority that “[i]t is undisputed that Fraczek and Fun disclose a lifting and lowering mechanism for a blind, comprising each element of the Appellants’ independent claims except the ribs (Br. 3, 6-7; Reply Br. 1-3).” I also agree with the majority that Buck teaches a yarn feeding apparatus including a drum which may be embodied with axially extending grooves or slots defining rib-like portions therebetween. In addition, I agree with the majority that the Examiner has not pointed out where Buck might teach that the axially extending grooves or slots facilitate gripping the cord or reduce friction for the sliding movement of the cord on the spool.

That said, I disagree with the Appellants’ contention that one of ordinary skill in the art would have had no reason to modify the apparatuses taught by Fraczek and Fun in light of the teachings of Buck. (App. Br. 4). In particular, Buck’s failure to expressly teach a purpose avowed by the Appellants for the ribs recited in claims 17 and 26, namely, “to control friction of the lift cord in both a circumferential and longitudinal direction relative to the spool” (App. Br. 5), should not be decisive of the appeal. I believe that functional similarities between the various devices taught by Fraczek, Fun and Buck would have provided one of ordinary skill in the art reason to modify Fraczek’s and Fun’s apparatuses.

Fraczek teaches a horizontal blind control including a lifting cord and a cord gathering shaft. (Fraczek, ¶ 0026). The lifting cord is fixed to the

cord gathering shaft so that the cord gathering shaft provides a structure for gathering the lifting cord when the slats of the blind are lifted. (Fraczek, ¶ 0032). During continued lifting of the slats, the lifting cord winds around the cord gathering shaft (Fraczek, ¶ 0039) in such a manner that previously wound coils will move across the cord gathering shaft away from newly formed coils of the lifting cord (Fraczek, ¶ 0040).

Fun teaches a lifting track for a curtain including a winding mechanism having a cord-winding shaft. “As the cord-winding shaft is turned, the cord is wound on the cord-winding shaft such that the cord slides from a large diametrical end of a cylindrical body of the cord-winding shaft toward a small diametrical end of the cylindrical body of the cord-winding shaft.” (Fun, col. 1, ll. 24-44).

The drum in Buck’s apparatus is formed with a sequence of conical and cylindrical surfaces including an essentially cylindrical surface which carries the major portion of the storage windings. (Buck, col. 2, ll. 31-34 and 47-51). The reference teaches that, because of this arrangement of conical and cylindrical surfaces, “automatic axial feed of the yarn from the run-on first conical surface to the cylindrical surface is insured while preventing tangling, or drop-off, of yarn loops.” (Buck, col. 2, ll. 56-59). The reference suggests that the storage windings of yarn on the cylindrical surface move or slide axially along the cylindrical surface in order to make room so that the conical surfaces may feed additional windings of yarn to the cylindrical surface. (See Buck, col. 6, ll. 58-68).

Fraczek, Fun and Buck address fundamentally similar problems, namely, the winding of cord-like material over substantially cylindrical

surfaces without tangling. All three references address these problems in a similar manner, namely, by facilitating axial movement of previously-formed coils away from the locations on the substantially cylindrical surfaces where new coils form.

In light of the similar solutions taught by the references to the problem of winding a cord like-material without tangling, Buck's teachings that the cylindrical surface "may be embodied with grooves or slots extending in the axial direction, so that the yarn rests only on the rib-like portions of the surface located between the grooves or slots" (Buck, col. 3, ll. 63-66) and that resting the yarn only on the rib-like areas of the surface "may be suitable under some circumstances for the purpose of yarn feeding" (Buck, col. 7, ll. 1-10) would have provided one of ordinary skill in the art reason to similarly improve Fraczek's or Fun's apparatuses by providing rib-like portions on the surfaces of Fraczek's cord gathering shaft and Fun's cylindrical body. For this reason, I conclude that the Appellants have not shown that the Examiner erred in rejecting claims 2, 3, 9-12, 17-28, 33-36 and 38-40 under section 103(a).

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